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**REMARKS**

Claims 1-23 are pending to the present application. By virtue of this response, claims 1, 3, 5, and 18 have been amended. Accordingly, claims 1-23 are currently under consideration. Amendment and cancellation of certain claims are not to be construed as dedication to the public of any of the subject matter previously presented.

**Claim Rejection under 35 U.S.C. § 101**

Claims 1-23 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to nonstatutory subject matter.

“Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101.” (MPEP §2106(II)(A), emphasis added) Under this test, “[a] claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result; i.e., the method recites a step or act of producing something that is concrete, tangible and useful.” (MPEP §2106(IV)(B)(2)(b), part ii). For example: “transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete and tangible result’ – a final share price ....” (MPEP §2106(II)(A); citing *State Street*, 149 F.3d at 1373).

The Office alleges that “claims 1-23 do not produce a tangible result.” (Office Action, §4) Applicants respectfully disagree. As one of ordinary skill in the art would recognize, the result of “controlling at least one test module” and “applying a test to the IC” as recited in the amended Claim 1 are the predicted behavior of the circuit.

Referring to Figure 2 of the present application, the site controller can control the at least one test module by loading pattern data, gathering response data, providing control, etc. For example, “a field service engineer could connect a laptop which runs the tester operating system to perform advanced diagnostics.” (See paragraph [0035]) In another example, “[I]f the test engineer

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made a mistake in the names of parameters, or the number (or possibly the types) of arguments to these parameters, the translation phase could catch it and provide a meaningful error message at translation time instead of waiting for a compile-time error message from the C++ compiler. This would be more useful to the test engineer.” (See paragraph [00288]) In yet another example, “mechanisms will be provided to test engineers who wish to debug or step through the operation of a Test Program without referring directly to the generated C++ code.” (See paragraph [00344]) Thus, similarly to the process in State Street, “controlling at least one test module” and “applying a test to the IC” as recited in Claim 1 are practical application in the technological arts because it transforms data into a useful, concrete, and tangible result – diagnostics, error messages, etc. In particular, these simulation results are useful, concrete, and tangible in the same sense as was the final share price (a calculated number) cited in State Street.

Hence, Applicants respectfully request that the Office withdraw the rejection under 35 U.S.C. 101.

#### **Claim Rejection under 35 U.S.C. § 112**

Claim 18 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response, claim 18 has been amended to depend from claim 17. Hence, Applicants respectfully request that the Office withdraw the rejections under 35 U.S.C. § 112.

#### **Claim Rejection under 35 U.S.C. § 102**

Claims 1-3, 5-6, 9-10, 16, 19-23 stand rejected under 35 U.S.C. 102(e) as allegedly being clearly anticipated by Hollander (U.S. Patent Application Publication 2002/0073375 A1, hereinafter the Hollander reference). Applicants respectfully traverse these rejections.

In response, Applicants submit that the Hollander reference does not disclose at least the element “specifying a site controller for controlling at least one test module, and wherein each test

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module includes vendor-supplied hardware and software components for applying a test to the IC” as recited in the amended claim 1 of the present application.

Specifically, Applicants submit that the Hollander reference does not disclose at least the test module as recited in the amended claim 1. In the rejection of claim 3, the Office Action indicates that test files 12, 20, and drive 32 of Figure 1 of the Hollander reference allegedly discloses the test module of the present invention. Applicants respectfully disagree. First, the test architecture files 12 and the test description files 20 are merely data files (See Hollander, page 4 [0068]). They are not vendor-supplied hardware and software component describing the vendor-specific test module. Second, the Hollander reference describes the function of the drive 32 as “permits the user to drive 32 or sample 34 any node in the design.” It merely describes the function of the drive 32, but it is silent regarding the whether it contains vendor-supplied hardware and software components.

On the other hand, the present application describes the standard module interface, denoted as IModule, provided by the tester system of the invention generically represents a vendor’s hardware module. Vendor-supplied module-specific software for the system may be provided in the form of executables such as dynamic link libraries (DLLs). Software for each module-type from a vendor may be encapsulated in a single DLL. Each such software module is responsible for providing vendor-specific implementations for the module interface commands, which comprise the API for module software development. There are two aspects of the module interface commands: first, they serve as the interface for users to communicate (indirectly) with a particular hardware module in the system, and second, they provide the interfaces that third-party developers can take advantage of to integrate their own modules into the site controller level framework. (See paragraphs [0064]-[0065].)

In addition, in the rejection of claim 5, the Office Action indicates that the Hollander reference at [0074]-[0076] allegedly discloses the test module of the present application. Applicants respectfully disagree because paragraphs [0074]-[0076] of the Hollander reference describe the data structure and general construct of objects of the verification tests. It is silent about the test module

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that includes vendor-supplied hardware and software components as required by the amended claim 1 of the present invention.

Even if the Hollander reference is found to disclose the test module of the present invention, Applicants submit that it does not disclose the site controller of the present invention. In the present invention, each site controller can be deployed on its own dedicated central processing unit (CPU) running a local operating system, which may be the same or different operating system than the host operating system running on the semiconductor test system. The site controller further controls at least a test module for applying tests to the semiconductor integrated circuit being tested. The claimed open architecture test system allows the integration of different test systems and test environments developed by different test vendors using their own specific controllers (such as CPUs and local operating systems) and test modules.

On the contrary, the Hollander reference discloses an apparatus for test generation during circuit design, which supports multiple simulation environments, such as Verilog, VHDL, C, and C++. Although the simulation may be performed by multiple computers or workstations running multiple instances of the same or different programs against one simulation (See Hollander reference, at page 7, paragraphs [0134]-[0140]), it does not disclose a tester system having the structure of **Site Controller(s)-Test Module(s)-DUT(s)** as required by the amended independent claim 1.

Therefore, for at least the reasons presented above, Applicants assert that claim 1 is allowable over the Hollander reference. Applicants also assert that claims 2-23, which variously depend from the independent claim 1, are allowable for at least the reason that they depend from an allowable independent claim.

### **Claim Rejection under 35 U.S.C. § 103**

Claims 8, 11-15 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Hollander (U.S. Patent Application Publication 2002/0073375 A1). Claims 4 and 7 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Hollander (U.S. Patent

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Application Publication 2002/0073375 A1) in view of National Instruments ("Matrix Switch Expansion Guide"). Claim 17 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Hollander (U.S. Patent Application Publication 2002/0073375 A1) in view of Schauss et al. (U.S. Patent No. 5,181,201). Applicants respectfully traverse these rejections.

In response, Applicants assert that claims 4, 7-8, 11-15, and 17 which variously depend from the independent claim 1, are allowable for at least the reason that they depend from an allowable independent claim.

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**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 333772000800. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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